



TRAINING PROGRAM – DEVELOPING AND IMPLEMENTING A TRAINING PROGRAM

The training program element is intended to cover personnel training related to plant operations, standard operating procedures, safe work practices and management of change. Although not within the scope of this training program element, CAPP regulation also has requirements for maintenance training and emergency response training. While facilities frequently opt to consolidate all personnel training, this data form is intended to support review of operations training program. However, the approach in this data form could be used to develop any facility training program.

The training syllabus included in this data form is intended to help the facility structure the training program requirements and to organize all training program materials. Prior to developing the training syllabus, several things must be considered.

<p><i>A note about the Position responsibility</i></p>	<p>In most facilities, operating personnel are assigned different levels of responsibility. This responsibility generally increases from 'new hire' to operations supervisor. (Refer to the conceptual organization chart on the following page.) The position responsibility must be defined before an effective training program can be developed as there will be differences in the scope of training and competency levels.</p>
<p><i>A note about the Comprehensive, accurate procedures</i></p>	<p>Procedures must be validated as being comprehensive and accurate, as these are one of the most significant training tools.</p>



CAPP regulation mandates that select topics be covered in training. Training that is beyond the regulatory mandate is obviously encouraged and does not have to be segregated from what is reported on this data form. CAPP does not evaluate the non-mandated training as it is outside the scope of regulation. The facility has the discretion to structure the training program to ensure that the topics are covered. There is no requirement that each of the mandated topics be covered in a dedicated session; however, it must be clear from the training materials that those topics are covered. These mandatory topics are:

- a. Overview of the Process: This training must cover the process flows and major control systems. Also covered would be the relevant operating parameters such as pressure, temperature and flow.
- b. Operating Procedures: This training must, at a minimum, cover the operator's responsibilities as related to those procedures. It must be clear from the training materials which procedures are being covered.
- c. Layout of the Plant & Location of Equipment and Instruments: The training must include some structured 'hands-on' sessions. The operators must be able to physically locate process equipment, instruments and piping. This training may include the requirement to trace P&IDs and locate equipment on a plot plan. (Note that teaching operators how to read P&IDs and other types of drawings would be very helpful.)
- d. Specific Safety and Health Hazards: Hazard Communication (HAZCOM) training can inform operators of hazardous substance properties, but additional training is necessary to ensure that the operator understands the state of the hazardous substances in the process at the process operating conditions. Additionally, they need to be trained in the appropriate personnel protective equipment.

*A note about the
Regulation-mandated
topics*



*A note about the
Regulation-mandated
topics (continued)*

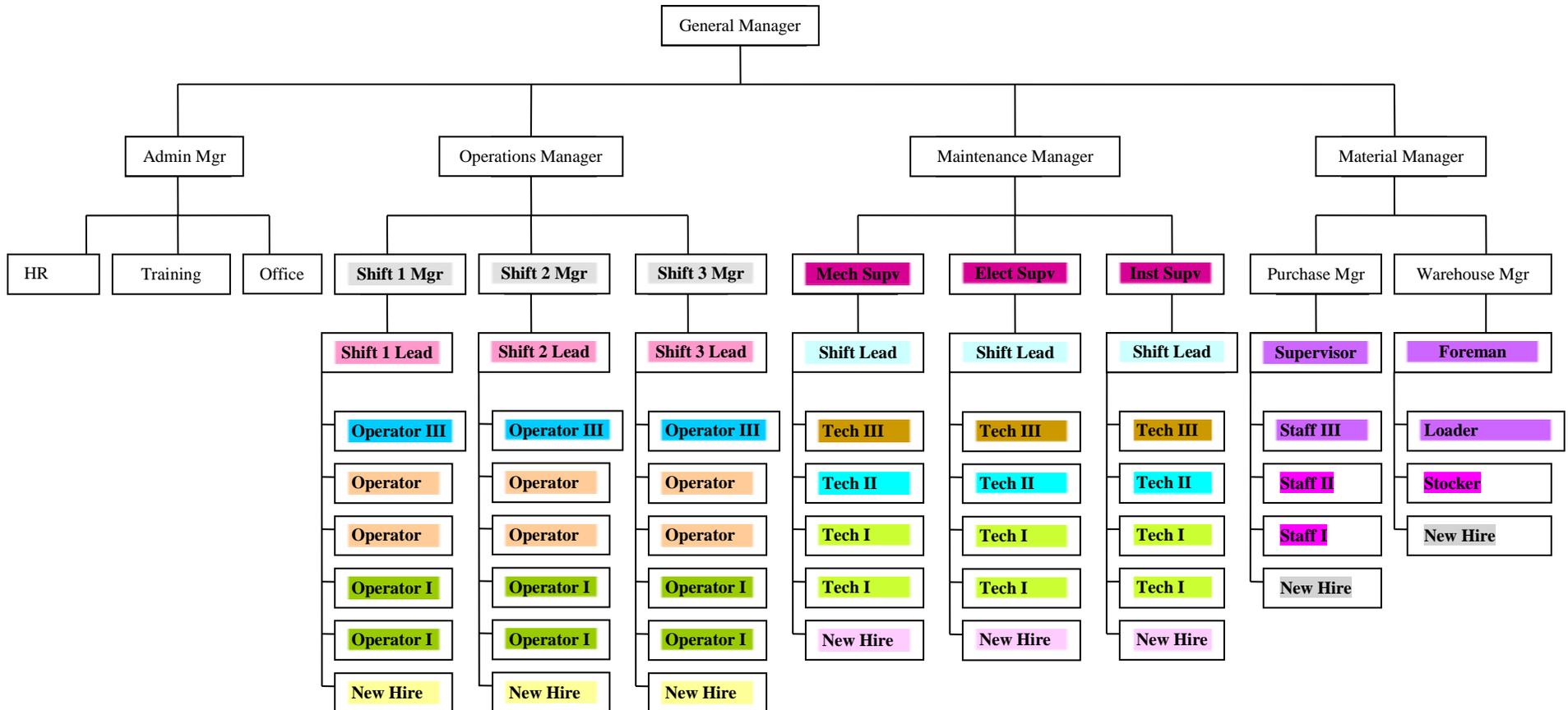
- e. Emergency Operations, including Emergency Shutdown: These types of operating procedures are emphasized in regulation but are actually covered by the required training under item 'b. Operating Procedures' above.
- f. Safe Work Practices: Examples of these procedures include Lockout/Tagout and Hot Work. While mechanics or electricians may be more directly involved in implementing some of the safe work practices, many times operators also have a significant role (for example: shutting down and evacuating hazardous materials from equipment, monitoring hazardous atmospheres, or actually issuing permits). The operators must be trained in the safe work practices.
- g. Management of Change (MOC): The operators are in a position to unwittingly introduce change to the mechanical process or the process procedures. They must be trained in the facility's MOC process to ensure that they are capable, at a minimum, of distinguishing a change from a replacement-in-kind, of knowing when the MOC process is necessary (or when to question if it is necessary) before taking a particular action in the process, and of understanding the MOC approval process required in advance of implementing a change.



<p><i>A note about the Training syllabus</i></p>	<p>In developing the training syllabus, each of the topics (or classes, or training sessions) must be determined. The table that follows, 'Suggested Format for a Training Syllabus', could be used to organize all training materials for a particular position. Please consider the following comments when developing the table:</p> <ul style="list-style-type: none">a. Training Topic: Describe subject matter or class name.b. Lesson Plans: There must be a developed lesson plan, even if the training material consists solely of the operating procedures. An individual other than the original trainer, must be able to conduct essentially the same training from that plan.c. Duration & Venue: Both will be dictated by the lesson plan.d. Type of Training: This would typically be either initial or refresher. There may be classes in which the training topic is covered in its entirety for refresher. If that is the case, indicate the type as both initial and refresher.e. Refresher Frequency: There is a regulatory requirement to conduct refresher training at least once every three years (or more frequently after consultation with employees) to ensure that the operator adheres to the current operating procedures. Every training topic that is listed as a refresher class must indicate a frequency.f. Competency Test: The facility must evaluate the operator's comprehension (administer a test) of the training. The way this is accomplished is at the facility's discretion. What is required: First, whether the test is written, oral or performance-based, the testing material must be documented. Second, acceptance criteria (pass/fail) must be defined. If an operator fails to pass a competency test, they will not be permitted to operate the process in the defined position.
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TRAINING PROGRAM – EXAMPLE ORGANIZATIONAL CHART



This organizational chart illustrates, using the concept of identifying training needs based upon job classification and job skill levels within each classification, the possible different training needs of a facility. In the example above, each group of colored boxes probably needs a separate training syllabus to insure each employee receives the training necessary to perform there assigned tasks.



TRAINING PROGRAM – SUGGESTED FORMAT FOR A TRAINING SYLLABUS

Facility:			Process:					Date:			
Position:											
Training Topic	References <i>(List the source document(s) that require this training topic. For example: NAC 459.95418, 29CFR1910 or Company Policy #08-123)</i>	Lesson Plans or Training Materials <i>(For example: Lesson Plan #123 or Document #456)</i>	Duration	Venue		Type of Training		Refresher Frequency	Competency Test Pass-Fail Criteria		
				Field	Classroom	Initial	Refresher		Written Test	Oral Test	Performance

Notes to Table:

1. This table may also include non-mandatory training. This type of training is provided to enhance an employee’s basic knowledge, but is outside the scope of training required by CAPP Regulations. Some examples might include: Overview of CAPP Elements; (Note: While training on the intent of each of the CAPP elements is not mandated by regulation, employee understanding of these elements is critical to ensure effective element implementation, which IS mandated by CAPP); Basic Math and Science; Process Fundamentals training (overview of chemical plant equipment and instruments); Advanced technical training using outside materials and/or trainers, such as from the Refrigeration Engineers & Technicians Assoc. (RETA), the Chlorine Institute (CI), the Chemical Manufacturers Assoc. (CMA), etc.